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Healing of diabetic foot ulcer by treatment with non-removable windowed cast boot: Prospective study of 255 cases

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The gold standard in the treatment of diabetic foot plantar ulcer is the total contact cast. The healing rate is excellent and the duration is 36 to 43 days. The main reason is the forced compliance of off loading. The ''princeps technique'' needs to open the cast every 10 days to check the foot and the wound and to make a new cast until healing. We described a new technique which allows not to open the cast until healing and with a window in the cast in front the wound. We studied the results of 255 cast boots from 1997 to 2010

We included 255 patients with diabetic foot plantar ulcer or plantar ulcer after conservative surgery of osteomyelitis. Peripheral arterial disease was an exclusion criterion. The cast boot was made by two physiotherapists of a department specialised in diabetic foot management. A window in the cast allowed the check and making dressing (Vaseline gauze). Patients were treated by heparin and were checked every week during a month and 4 weeks after 1 month in the diabetic foot department.

Results.– Two hundred and twenty-five windowed cast boot were made from 1997 to 2010. Demographic data were: 75% men, 78% type 2 diabetes, average age: 57 years, history of diabetes since 14 years, of plantar ulcer: 1.5 years, 80ù plantar ulcer and 14.5% ulcer after conservative surgery of osteomyelitis. Locus of wound: fore foot 46%, mid-foot 35%, hind-foot 12%, mix 7%.

Average surface of wound: 4.77 cm^2.

Compliance: 96% cast boot kept.

Healing rate 81.4% in 95 days for plantar ulcer and 82% in 86 days after surgery.

Complications: minor ulceration by the cast: $n = 23$, 36 changed casts

Conclusion.– Non-removable windowed cast boot is as effective as total contact cast without the obligation to open it until healing, in the treatment of diabetic plantar ulcer.

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The treatment of the hyperhidrosis of the residual limb, the contribution of the botulinum toxin: About a series of case at the military hospital Percy

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The hyperhidrosis is defined as an inappropriate secretion of sweat with regard to the needs of thermoregulation.

The residual limb hyperhidrosis results both from the coverage of the residual limb by sockets and liners and from the relative increase of the perspiration caused by the decreased body surface. It decreases the prothesis function particularly during warm periods, periods of strong professional activity or in sport activities. Dermatological problems can occur. The impact on quality of life can be important.

The conventional treatments are topical ones: aluminum chloride hexahydrate and tab water iontophoresis.

The botulinum toxin is used for several years to treat the axillary, palmar and plantar hyperhidroses. The marketing authorization in France was obtained in 2003 for the botulinum toxin Botox® in the axillary hyperhidrosis only.

We now proposed this treatment to the amputee patients suffering from hyperhidrosis, after failure of the aluminum chloride hexahydrate treatments (intradermal injections of 100 Botox® units in 4 mL of 0.9% isotonic saline, in 40 points, distributed uniformly on the zone covered by the liner).

The analysis of the results of the nine first lower limb amputee patients showed an improvement of the functional parameters that is not inconsiderable. Thus we could determine relevant evaluation criteria to build a research protocol to valid our medical practice.

The ''Visual Analog Scale (VAS)-discomfort caused by the sweat'', the ''VAS-mismatch of prosthesis by hyperhidrosis'', the ''VAS-disturbances of gait by hyperhidrosis'', the number of time the patient has to take off its prosthesis to dry it by day and the score of cutaneous quality of life (DLQI) are among the main evaluation criteria.

Further reading

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Prosthetic devices and rehabilitation for bilateral femoral amputation

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Keywords: Femoral amputation; Rehabilitation; Prosthetic device

Introduction.– Progress of the medical and surgical treatments during the last decades should reduce the rate of lower limbs major amputations. Efforts for prevention of the industrial and road accidents should follow this trend. However, these benefits tend to be counterbalanced by the increase of the life expectancy for the dysvascular patients and also for the victims of crash. So the number of amputees sent to rehabilitation centers to update the treatment and the care of a bilateral femoral amputation does not seem to decrease. The progress of the prosthetic equipments and the development of the use of technical aids for mobility are in permanent evolution. They should be regularly assessed to update the functional live of patients with amputation.

Discussion.– Four cases of bilateral femoral amputation occurred in 2011 are presented. They have very different clinical stories, traumatic or dysvascular origin. The authors review the perspectives of equipment, rehabilitation and the hopes of functional recovery within the framework of this type of major handicap. A particular attention will concern the type of equipment and his use in everyday life. An aspect also interesting to take into account is the resilience of the patients facing a bilateral amputation.

Conclusion.– On the light of this clinical observation, the authors underline that the bilateral femoral amputation always represents a considerable handicap. The prosthetic equipment can bring a functional improvement in several situations of everyday life. But, despite the technical progress, prosthetic equipment is not always useful or possible and, mostly, manual or electronic wheelchair will represent the basic tool to travel. The individual situations are very variable and the practitioner has to adapt the equipment and rehabilitation individually.

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